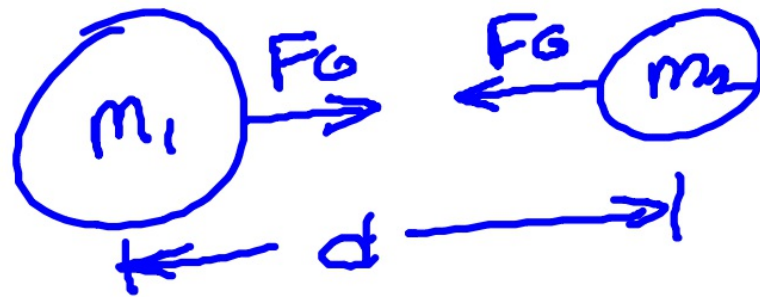


$$F_G \propto \frac{m_1 m_2}{d^2}$$

PROPORTIONAL  
TO

$F_G$  = GRAVITATIONAL FORCE  
measured in Newtons  
Vector



GRAVITATION FORCE IS  
EQUAL + OPPOSITE

(VALUE) (DIRECTION)

" $m_1$ " + " $m_2$ " ARE THE MASSES OF  
"THE OBJECTS"

" $d$ " IS THE DISTANCE BETWEEN THE  
OBJECTS

$$F_G \propto \frac{m_1 m_2}{d^2}$$

$$F_G = G \frac{m_1 m_2}{d^2}$$

GRAVITATIONAL  
CONSTANT

$$G = 6.67 \times 10^{-11} \frac{\text{N} \cdot \text{m}^2}{\text{kg}^2}$$

$$m_1 = 5.97 \times 10^{24} \text{ kg}$$
$$G = 6.67 \times 10^{-11} \frac{\text{Nm}^2}{\text{kg}^2}$$

$$F_G \propto \frac{m_1 m_2}{d^2}$$

#1

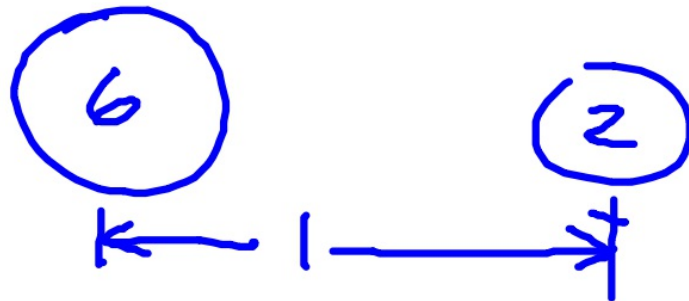
A)



$$F_G \propto \frac{m_1 m_2}{d^2}$$

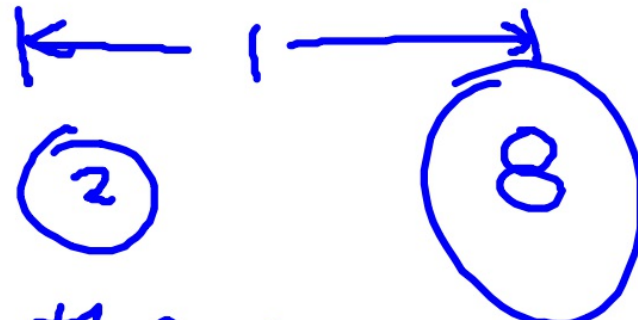
$$\frac{4 \times 2}{1^2} = \frac{8}{1} = 8 \text{ N}$$

B)



$$\frac{6 \times 2}{1^2} = \frac{12}{1} = 12 \text{ N}$$

C)

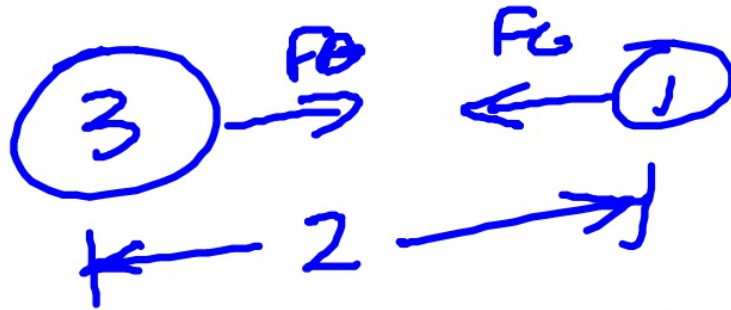


$$\frac{2 \times 8}{1^2} = \frac{16}{1} = 16 \text{ N}$$

$F_G$  is the greatest

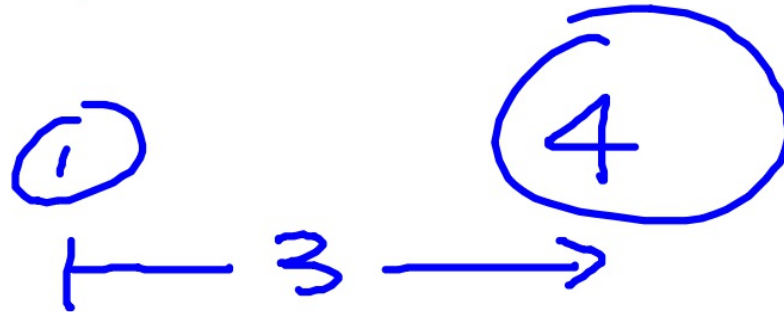
#2

A)



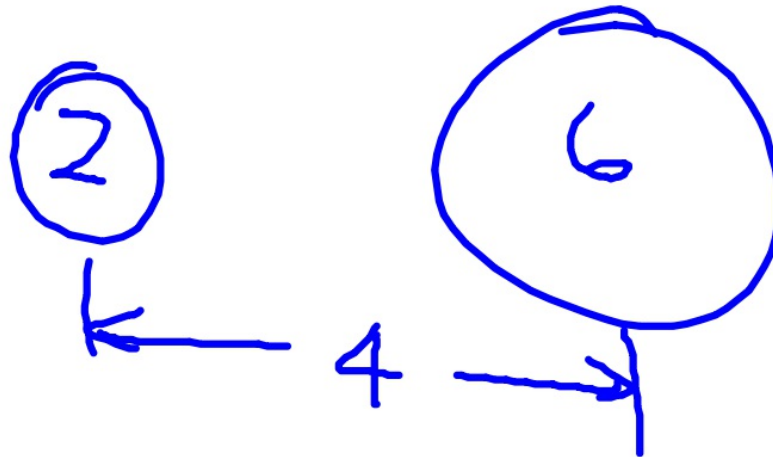
$$\frac{3 \times 1}{2^2} = \frac{3}{4} = .75 \text{ N}$$

B)



$$\frac{4 \times 1}{3^2} = \frac{4}{9} = .44 \text{ N}$$

C)



$$\frac{2 \times 6}{4^2} = \frac{12}{16} = .75 \text{ N}$$